

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

- Product Name** • **Asbestos, Crocidolite**
- Synonyms** • Asbestiform Riebeckite; Blue asbestos; Crocidolite Asbestos
- Product Code** • 02704A-AB; 02704-AB

1.2 Relevant identified uses of the substance or mixture and uses advised against

- Relevant identified use(s)** • Laboratory standard in the microscopy laboratory

1.3 Details of the supplier of the safety data sheet

- Manufacturer** • SPI Supplies Division Structure Probe, Inc.
206 Garfield Ave.
West Chester, PA 19380
United States
<http://www.2spi.com>
SDS@2spi.com
- Telephone (General)** • 1-(610)-436-5400

1.4 Emergency telephone number

- Manufacturer** • 1-(800)-424-9300 - Chemtrec
- Manufacturer** • 1-(703)-741-5970 - Worldwide

Section 2: Hazards Identification

EU/EEC

According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 2015/830]

2.1 Classification of the substance or mixture

- CLP** • Carcinogenicity 1A - H350
Specific Target Organ Toxicity Repeated Exposure 1 - H372

2.2 Label Elements

CLP

DANGER



- Hazard statements** • H350 - May cause cancer.
H372 - Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention** • P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust.
P264 - Wash thoroughly after handling.

P270 - Do not eat, drink or smoke when using this product.

P281 - Use personal protective equipment as required.

Response • P308+P313 - IF exposed or concerned: Get medical advice/attention.

P314 - Get medical advice/attention if you feel unwell.

Storage/Disposal • P405 - Store locked up.

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other Hazards

- CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

- OSHA HCS 2012**
- Carcinogenicity 1A
Specific Target Organ Toxicity Repeated Exposure 1

2.2 Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • May cause cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

- Prevention** • Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.

- Response** • IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.

- Storage/Disposal** • Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

2.3 Other hazards

- OSHA HCS 2012**
- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Asbestos, crocidolite	CAS:12001-28-4 EU Index:650-013-00-6	> 99.99%	NDA	EU CLP: Annex VI, Table 3.1: Carc. 1A, H350; STOT RE 1, H372 ** OSHA HCS 2012: Carc. 1A; STOT RE 1 (Lungs)	NDA

3.2 Mixtures

- Material does not meet the criteria of a mixture.

Section 4 - First Aid Measures

4.1 Description of first aid measures

- | | |
|-------------------|---|
| Inhalation | • Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. If signs/symptoms continue, get medical attention. |
| Skin | • Wash skin with soap and water. Flush with copious amounts of water for 15 minutes. |
| Eye | • In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. Get medical attention immediately. |
| Ingestion | • Obtain medical attention immediately if ingested. |

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|---------------------------|--|
| Notes to Physician | • All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. |
|---------------------------|--|

Section 5 - Firefighting Measures

5.1 Extinguishing media

- | | |
|-------------------------------------|------------------------------|
| Suitable Extinguishing Media | • Water, Foam, Dry Chemical. |
|-------------------------------------|------------------------------|

- | | |
|---------------------------------------|---------------------|
| Unsuitable Extinguishing Media | • No data available |
|---------------------------------------|---------------------|

5.2 Special hazards arising from the substance or mixture

- | | |
|---|---|
| Unusual Fire and Explosion Hazards | • Negligible fire and explosion hazard. Toxic gases and asbestos particulate may be released in a fire. |
| Hazardous Combustion Products | • No data available |

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | |
|-----------------------------|---|
| Personal Precautions | • Ventilate enclosed areas. Do not walk through spilled material. Wear appropriate personal protective equipment, avoid direct contact. |
| Emergency Procedures | • As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. |

6.2 Environmental precautions

- Avoid run off to waterways and sewers.

6.3 Methods and material for containment and cleaning up

- | | |
|-----------------------------|--------------------------|
| Containment/Clean-up | • Avoid generating dust. |
|-----------------------------|--------------------------|

Measures

Use HEPA vacuum wet methods when feasible.
Carefully shovel or sweep up spilled material and place in suitable container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage**7.1 Precautions for safe handling****Handling**

- Use only with adequate ventilation. Minimize dust generation and accumulation. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe dust. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco.

7.2 Conditions for safe storage, including any incompatibilities**Storage**

- Store in well-sealed container in cool, dry area in accordance with all current regulations and standards.

7.3 Specific end use(s)

- This item is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption. Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection**8.1 Control parameters**

Exposure Limits/Guidelines		
	Result	OSHA
Asbestos, crocidolite (12001-28-4)	TWAs	0.1 fiber/cm ³ TWA

8.2 Exposure controls**Engineering Measures/Controls**

- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Ensure that dust handling systems (such as exhaust ducts, dust collectors, vessels and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is not leakage from the equipment).

Personal Protective Equipment**Respiratory**

- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear safety goggles.

Skin/Body

- Wear appropriate gloves. Wear long sleeves and/or protective coveralls.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Additional Protection Measures

- An eyewash station and emergency shower must be available to the work station.

Key to abbreviations

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	Lavender, blue or green, odorless, fibrous solid.
Color	Lavender, blue or green.	Odor	Odorless
Odor Threshold	Data lacking		
General Properties			
Boiling Point	Data lacking	Melting Point/Freezing Point	1200 °C(2192 °F)
Decomposition Temperature	1000 °C(1832 °F)	pH	Data lacking
Specific Gravity/Relative Density	3.37 g/cc	Water Solubility	Data lacking
Viscosity	Data lacking	Explosive Properties	Data lacking
Oxidizing Properties:	Data lacking		
Volatility			
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability			
Flash Point	Data lacking	UEL	Data lacking
LEL	Data lacking	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental			
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid

- Avoid generating dust.

10.5 Incompatible materials

- Strong oxidizers, strong acids, and bases.

10.6 Hazardous decomposition products

- None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Components		
Asbestos, crocidolite (> 99.99%)	12001-28-4	<p>Multi-dose Toxicity: Inhalation-Rat TCLo • 10 mg/m³ 6 Hour(s) 1 Year(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial)</i>; <i>Lungs, Thorax, or Respiration:Fibrosing alveolitis</i>; Inhalation-Rat TCLo • 7200 µg/m³ 6 Hour(s) 20 Day(s)-Intermittent; <i>Lungs, Thorax, or Respiration:Fibrosis (interstitial)</i>;</p> <p>Mutagen: Specific locus test • Inhalation-Mouse • 5.75 mg/m³ 6 Hour(s) 5 Day(s);</p> <p>Tumorigen / Carcinogen: Inhalation-Rat • 12 mg/m³ 13 Week(s)-Intermittent; <i>Tumorigenic:Neoplastic by RTECS criteria</i>; <i>Lungs, Thorax, or Respiration:Tumors</i>; Inhalation-Rat TCLo • 11 mg/m³ 1 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria</i>; <i>Lungs, Thorax, or Respiration:Tumors</i></p>

GHS Properties	Classification
Acute toxicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin corrosion/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Serious eye damage/Irritation	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Skin sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Respiratory sensitization	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Aspiration Hazard	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Carcinogenicity	EU/CLP • Carcinogenicity 1A; May cause cancer OSHA HCS 2012 • Carcinogenicity 1A
Germ Cell Mutagenicity	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
Toxicity for Reproduction	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-SE	EU/CLP • Data lacking OSHA HCS 2012 • Data lacking
STOT-RE	EU/CLP • Specific Target Organ Toxicity Repeated Exposure 1 OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1

Potential Health Effects

Inhalation

Acute (Immediate)

- Exposure to dust may cause irritation. Processes such as cutting, grinding, crushing, or impact may result in generation of excessive amounts of airborne dusts in the workplace. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

- Overexposure to breathing asbestos may cause asbestosis, pulmonary fibrosis, mesothelioma, other lung disorders or cancer. All types of asbestos are known to cause inflammatory changes in lungs and pleurae. However, there is experimental and epidemiologic evidence that there may be differences in the potential of different asbestos types to produce disease. It has been suggested that crocidolite has greatest potential to produce disease; chrysotile, the smallest; with amosite occupying an intermediate position.

Skin

Acute (Immediate)

- Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

- No data available

Eye**Acute (Immediate)**

- Exposure to dust may cause mechanical irritation. Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

- No data available

Ingestion**Acute (Immediate)**

- Excessive concentrations of nuisance dust in the workplace may cause mechanical irritation to mucous membranes.

Chronic (Delayed)

- No data available

Carcinogenic Effects

- Repeated and prolonged exposure may cause cancer.

Carcinogenic Effects				
	CAS	OSHA	IARC	NTP
Asbestos, crocidolite	12001-28-4	Specifically Regulated Carcinogen	Group 1-Carcinogenic	Known Human Carcinogen

Key to abbreviations

TC = Toxic Concentration

Section 12 - Ecological Information**12.1 Toxicity**

- Material data lacking.

12.2 Persistence and degradability

- Material data lacking.

12.3 Bioaccumulative potential

- Material data lacking.

12.4 Mobility in Soil

- Material data lacking.

12.5 Results of PBT and vPvB assessment

- No PBT and vPvB assessment has been conducted.

12.6 Other adverse effects

- No studies have been found.

Section 13 - Disposal Considerations**13.1 Waste treatment methods****Product waste**

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards

DOT	NA2212	Asbestos	9	III	NDA
IMO/IMDG	UN2212	ASBESTOS, AMPHIBOLE	9	II	NDA
IATA/ICAO	UN2212	Asbestos, amphibole	9	NDA	NDA

14.6 Special precautions for user • None specified.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code • Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Chronic

Inventory						
Component	CAS	Canada DSL	Canada NDSL	EU EINECS	EU ELNICS	TSCA
Asbestos, crocidolite	12001-28-4	No	No	No	No	No

Canada

Labor		
Canada - WHMIS 1988 - Classifications of Substances		
• Asbestos, crocidolite	12001-28-4	D2A
Canada - WHMIS 1988 - Ingredient Disclosure List		
• Asbestos, crocidolite	12001-28-4	0.1 %

Environment		
Canada - CEPA - Priority Substances List		
• Asbestos, crocidolite	12001-28-4	Not Listed

United States

Labor		
U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - OSHA - Specifically Regulated Chemicals		
• Asbestos, crocidolite	12001-28-4	1.0 fiber/cm ³ Excursion Limit (See 29 CFR 1910.1001, 30 min); 0.1 fiber/cm ³ TWA (See 29 CFR 1910.1001)

Environment		
U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities		
• Asbestos, crocidolite	12001-28-4	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - CERCLA/SARA - Section 313 - Emission Reporting		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing		
• Asbestos, crocidolite	12001-28-4	Not Listed

United States - California

Environment		
U.S. - California - Proposition 65 - Carcinogens List		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - California - Proposition 65 - Developmental Toxicity		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Female		
• Asbestos, crocidolite	12001-28-4	Not Listed
U.S. - California - Proposition 65 - Reproductive Toxicity - Male		
• Asbestos, crocidolite	12001-28-4	Not Listed

15.2 Chemical Safety Assessment

- No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

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Key to abbreviations

NDA = No Data Available